

1. THE DOMED STADIUM - WORLD'S FIRST AIR-CONDITIONED ALL-PURPOSE STADIUM

The world's first air-conditioned, domed, all-purpose stadium, shining like a precious jewel in southwest Houston, Texas, was constructed by the citizens of Harris County at a cost of \$20.5 million plus \$3 million for the land on which the site is located, and a total cost of \$31.6 million for the entire project including access roads and parking.

The stadium is leased for 40 years to the Houston Sports Association, which owns and operates Houston's National League baseball club. The HSA pays an annual lease fee of \$750,000 plus all operating costs, and has the right to sub-lease the stadium.

2. HOME OF-

- \* Houston Astros National League baseball team
- \* Houston Oilers American League football team
- \* University of Houston Cougar football team
- \* Houston Livestock Show and Rodeo
- \* Conventions of all types and sizes
- \* Religious conclaves
- \* Shows and Circuses
- \* Championship Boxing matches
- \* Other Sports and functions

3. STADIUM COMPLEX COVERS 260 ACRES

The stadium structure itself covers nine and a half acres of land, and the entire complex, including exhibition hall and parking area, covers 260 acres.

The outside diameter of the stadium structure is 710 feet and the floor of the stadium is approximately 25 feet below normal ground level, affording minimum vertical travel by fans.

4. COMFORTABLE CUSHIONED, UPHOLSTERED SEATING

There are 41,000 cushioned, upholstered (seat and back) theatrical type seats in the stadium and 4,000 pavillion seats that have cushioned upholstered seats and wooden backs.

The seating capacities are 45,000 for baseball, 52,000 for football, 60,000 for conventions and a maximum of 66,000 for boxing or like event.

Seating can be arranged to accommodate any type of sport or meeting from rodeos to national political conventions. To convert from baseball to football seating, one only has to press a button and stands holding 10,000 seats will move around on steel rails until they parallel the football sidelines.

Seating is arranged on six levels, allowing in effect, six front rows. All seats face the center of the playing area for baseball and football with the radius point of all rows 20 feet behind second base on the baseball diamond. This means that the seats in center field stands are just as close to the center of action as some of the best seats behind home plate.

1. THE DOME STADIUM - WORLD'S FIRST AIR-CONDITIONED ALL-PURPOSE STADIUM

The world's first air-conditioned, domed, all-purpose stadium, shining like a precious jewel in southeast Houston, Texas, was constructed by the citizens of Harris County at a cost of \$20.5 million plus \$3 million for the land on which the site is located, and a total cost of \$23.5 million for the entire project including access roads and parking.

The stadium is leased for 40 years to the Houston Sports Association, which owns and operates Houston's National League baseball club. The HSA pays an annual lease fee of \$750,000 plus air operating costs, and has the right to sub-lease the stadium.

2. HOME OF

- \* Houston Astros National League baseball team
- \* Houston Oilers American League football team
- \* University of Houston Cougar football team
- \* Houston Livestock Show and Rodeo
- \* Conventions of all types and sizes
- \* Religious convocations
- \* Shows and Circuses
- \* Championship Boxing matches
- \* Other sports and functions

3. STADIUM COMPLEX COVERS 200 ACRES

The stadium structure itself covers nine and a half acres of land, and the entire complex, including exhibition hall and parking area, covers 200 acres. The outside diameter of the stadium structure is 710 feet and the floor of the stadium is approximately 25 feet below normal ground level, affording minimum vertical travel by fans.

A. COMFORTABLE CUSHIONED, UNFOLDED SEATING

There are 41,000 cushioned, upholstered (seat and back) theatrical type seats in the stadium and 4,000 partition seats that have cushioned upholstered seats and wooden backs.

The seating capacities are 42,000 for baseball, 22,000 for football, 60,000 for conventions and a maximum of 66,000 for boxing or like event.

Seating can be arranged to accommodate any type of sport or meeting from rodeos to national political conventions. To convert from baseball to football seating, one only has to press a button and stands holding 10,000 seats will move around on steel rails until they parallel the football sidelines.

Seating is arranged on six levels, allowing in effect, six front rows. All seats face the center of the playing area for baseball and football with the radius point of all rows 20 feet behind second base on the baseball diamond. This means that the seats in convex field stands are just as close to the center of action as some of the seats

seats behind home plate.

#### 5. LUXURIOUS SPACE BOXES

Luxurious and prestige space boxes are located on the upper level of the stadium. These 24 or 30-seat boxes will be joined by a private room, appropriately decorated and carpeted, featuring closed-circuit TV, refrigerators, ice makers, telephones, private rest room, and catered hors d'oeuvres.

Private elevators deliver the occupants of these "miniature private clubs" to their seats and a unique dining room featuring Japanese "tempura" is available for exclusive dining.

#### 6. RAMPS AND ESCALATORS PROVIDE EASY ACCESS TO SEATS

Wide, low-pitched ramps and two sets of escalators provide easy access to the seats and the entire stands can be emptied in nine minutes with a maximum crowd.

Spectators enter the stadium at about mid-point, since the playing field is about 25 feet below ground level, providing a short distance to walk or ride.

#### 7. UNIQUE ROOF AND LIGHTING SYSTEM

The permanent roof of the dome, which has a clear span of 642 feet (twice that of any previous structure), has a maximum height of 208 feet above the playing field. This would allow the construction of an 18-story building under the roof.

The roof design consists of a steel lamella frame incorporating trussed beams arching upward to meet at the center and braced in a diamond pattern.

This steel skeleton supports a roof containing 4,596 skylights (7'2" by 3'4") each made of cast acrylic sheet, a transparent plastic that admits sunlight for day games and nourishes the grass playing areas.

The roof can withstand hurricane winds of 135 m.p.h. and gusts of 165 m.p.h.

At night the playing field is illuminated to an average brightness of 150 foot candles by 1,906 floodlights and the total electric power consumed will exceed 18,000 KVA, more than that needed by a city of 9,000 population.

#### 8. OVER 6,000 TONS OF AIR-CONDITIONING

The stadium is completely air-conditioned with 6,600 tons of cooling capacity, costing some \$4.5 million. The system will circulate 2.5 million cubic feet of air each minute. Every minute 250,000 cubic feet of fresh air will be drawn into the stadium and conditioned by electronic filters and activated charcoal odor removers before going distributed through the system. Smoke and hot air will be drawn out through the top of the roof.

The Tiffway Bermuda grass, tested and selected for its ability to flourish best under the dome, will spend cool summers inasmuch as the air-conditioning system will be run continuously to avoid heat and humidity build-up.

5. LUXURIOUS SPACE BOXES

Luxurious and prestige space boxes are located on the upper level of the stadium. These 24 or 30-seat boxes will be joined by a private room, appropriately decorated and carpeted, featuring closed-circuit TV, refrigerator, ice maker, telephone, private rest room, and catered hors d'oeuvres. Private elevators deliver the occupants of these "miniature private clubs" to their seats and a unique dining room featuring Japanese "tempura" is available for exclusive dining.

6. RAMP AND ESCALATORS PROVIDE EASY ACCESS TO SEATS

Wide, low-pitched ramps and two sets of escalators provide easy access to the seats and the entire stands can be emptied in nine minutes with a maximum crowd. Spectators enter the stadium at about mid-point, since the playing field is about 25 feet below ground level, providing a short distance to walk or ride.

7. UNIQUE ROOF AND LIGHTING SYSTEM

The permanent roof of the dome, which has a clear span of 642 feet (twice that of any previous structure), has a maximum height of 208 feet above the playing field. This would allow the construction of an 18-story building under the roof. The roof design consists of a steel lamella frame incorporating trussed beams arching upward to meet at the center and braced in a diamond pattern.

This steel skeleton supports a roof containing 4,200 skylights (7'2" by 3'4") each made of cast acrylic sheet, a transparent plastic that admits sunlight for day games and nourishes the grass playing areas.

The roof can withstand hurricane winds of 125 m.p.h. and gusts of 165 m.p.h. At night the playing field is illuminated to an average brightness of 120 foot candles by 1,900 floodlights and the total electric power consumed will exceed 18,000 KW, more than that needed by a city of 9,000 population.

8. OVER 6,000 TONS OF AIR-CONDITIONING

The stadium is completely air-conditioned with 6,600 tons of cooling capacity, costing some \$4.5 million. The system will circulate 2.5 million cubic feet of air each minute. Every minute 250,000 cubic feet of fresh air will be drawn into the stadium and conditioned by electronic filters and activated charcoal odor removers before being distributed through the system. Smoke and hot air will be drawn out through the top of the roof.

The Tilley Bermuda grass, tested and selected for its ability to flourish best under the dome, will spend cool summers inasmuch as the air-conditioning system will be run continuously to avoid heat and humidity build-up.

9. SYMMETRICAL PLAYING FIELD

The playing field was built approximately 25 feet below ground level, requiring the removal of 250,000 cubic yards of dirt.

For baseball, the distance from home plate along foul lines is 340 feet. The power alleys in left and right center will be 375 feet and direct center field will be 406 feet.

For football, the usual dirt areas on a baseball diamond will be sodded over to form an all-grass playing field.

10. TWO MILLION DOLLAR SCOREBOARD

The domed stadium scoreboard is an attraction itself featuring all pertinent sports information plus an electrical show that lasts over 40 seconds when the home team hits a home run or scores a point.

The scoreboard, which is costing \$2 million, is adaptable to all spectator sports and is over 400 feet long. It includes a telilite picture screen in direct center field, an autogram message board, and three additional boards for valuable information such as lineups, scores, balls and strikes, averages and special plays.

There are two auxiliary scoreboards that will display the most pertinent information.

11. DINING AND REFRESHMENTS

The stadium features five dining areas in addition to concessions areas on each level of seating.

The private stadium club, a public cafeteria, a public western-style dining room, a sidewalk cafe-type restaurant in center field and a deluxe dining area on the top level provide excellent and varied eating facilities.

Arrangements may also be made for group dining.

12. PARKING FOR 30,000 CARS WITH EASY ACCESS

Paved parking area surrounding the stadium provide parking space for more than 30,000 cars, which is more parking area than any sports stadium now in operation or on the drawing boards.

Eight traffic arteries radiate from the circular stadium in every direction.

Houston's new network of freeways will make it possible for fans to reach the stadium without battling downtown traffic or congested areas.

13. WORLD'S GREATEST CONVENTION FACILITY

The domed stadium and the exhibit center, which will be built on the south side of the stadium and is due for completion early in 1966, will provide the largest and finest facility in the world for conventions, trade shows and public expositions.

Fraternal, religious, political and educational organizations that attract from 10,000 to 60,000 people will find the stadium complex especially appealing.

9. SYMMETRICAL PLAYING FIELD

The playing field was built approximately 25 feet below ground level, requiring the removal of 250,000 cubic yards of dirt. For baseball, the distance from home plate along foul lines is 340 feet. The power alleys in left and right center will be 325 feet and direct center field will be 400 feet. For football, the usual dirt areas on a baseball diamond will be sodded over to form an all-grass playing field.

10. TWO MILLION DOLLAR SCOREBOARD

The domed stadium scoreboard is an attraction itself featuring all pertinent sports information plus an electrical show that lasts over 40 seconds when the home team hits a home run or scores a point. The scoreboard, which is costing \$2 million, is adaptable to all spectators and is over 400 feet long. It includes a relief picture screen in direct center field, an autogram message board, and three additional boards for valuable information such as lineup, scores, balls and strikes, averages and special plays. There are two auxiliary scoreboards that will display the most pertinent information.

11. DINING AND RETIREMENTS

The stadium features five dining areas in addition to concession areas on each level of seating. The private stadium club, a public cafeteria, a public western-style dining room, a sidewalk cafe-type restaurant in center field and a deluxe dining area on the top level provide excellent and varied eating facilities. Arrangements may also be made for group dining.

12. PARKING FOR 30,000 CARS WITH EASY ACCESS

Paved parking area surrounding the stadium provide parking space for more than 30,000 cars, which is more parking area than any sports stadium now in operation or on the drawing boards. Right traffic arteries radiate from the circular stadium in every direction. Houston's new network of freeways will make it possible for fans to reach the stadium without battling downtown traffic or congested areas.

13. WORLD'S GREATEST CONVENTION FACILITY

The domed stadium and the exhibit center, which will be built on the south side of the stadium and is due for completion early in 1966, will provide the largest and finest facility in the world for conventions, trade shows and public exhibitions. Federal, religious, political and educational organizations that attract from 10,000 to 50,000 people will find the stadium complex especially appealing.

The brightly illuminated, fully air-conditioned exhibit center will offer over 500,000 square feet of exhibit space on one level. No other facility in the world approaches such facilities.

The 13-acre exhibit center can be divided into four separate sections of 125,000 square feet each. The three "main" entrances with attractive lobbies for convention registration make it easy to accommodate more than one convention at a time.

Forty-two truck docks, three extra wide drive-in ramps, electrical service at 120, 220 and 440 volts, water and drain, gas and compressed air connections give manufacturers and exhibitors easy access and an opportunity to animate their exhibits at low budget rates.

So that convention registrants can always be convenient to both exhibits and the convention sessions, a "dress circle" of meeting rooms and private dining rooms can be seen from the exhibit area proper and reached by a short escalator ride from any of the three lobbies. Facilities on the meeting room mezzanine accommodate conferences for 40-50 persons, audio-visual presentations for 400 or 500 and business sessions of 1,000 to 2,000. Registrants would go to and from the meetings through the exhibits.

Exhibitors will find the hospitality suites of the domed stadium especially effective for conferences with key buyers.

The stadium complex will have the dual attraction of a theatre-like demonstration in the dome and exhibits on display at the same time in the adjacent exhibit center.

The extensive parking area make it practical to accommodate 100,000 persons per day.

#### 14. PRESS FACILITIES AND MISCELLANEOUS

Press facilities include: separate press box locations for football and baseball; darkrooms for both black and white and color film processing, complete wire service facilities, including 100 direct wires for Western Union; closed circuit TV; a central TV and radio control room behind the press box; workrooms, a press dining area; and rooms for interviewing sports figures, candidates, entertainers and VIP's.

Photo booths are available at various locations including an over-head photo area that will permit photographers and television cameramen to obtain shots from directly above the playing field.

Also included in the stadium are: offices of the Houston Sports Association, locker rooms for baseball, football, entertainers, park help, etc., first aid rooms and, of course, restrooms on every level.

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Exhibitors will find the hospitality of the domed stadium especially effective for conferences with key buyers. The stadium complex will have the best attraction of a theatre-like demonstration in the dome and exhibits on display at the same time in the adjacent exhibit center. The extensive parking area makes it practical to accommodate 100,000 persons per day.

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Photo booths are available at various locations including an overhead photo area that will permit photographers and television cameramen to obtain shots from directly above the playing field.

Also included in the stadium are: offices of the National Sports Association; locker rooms for baseball, football, basketball, tennis, etc.; first aid rooms and, of course, restrooms on every level.

15. THE ARCHITECTS AND ENGINEERS

The architects were Lloyd and Morgan, Houston; and Wilson, Morris, Crain and Anderson, Houston. Consultants were Praeger, Kavanaugh and Waterbury, New York.

Consulting engineers were Lockwood, Andrews and Newnam, Houston; I. A. Naman and Associates; Dale S. Cooper; and John G. Turney.

Consulting engineers for the dome roof were Roof Structures, Inc., St. Louis, Missouri.

Contractors were H. A. Lott, Inc., and Johnson, Drake and Piper, Inc.

12. THE ARCHITECTS AND ENGINEERS

The architects were Lloyd and Morgan, Houston; and Wilson, Morris, Grain and Anderson, Houston. Consultants were Trayer, Kavanaugh and Waterbury, New York. Consulting engineers were Lockwood, Andrews and Newman, Houston; I. A. Naman and Associates; R. S. Cooper; and John G. Tarney. Consulting engineers for the dome roof were Roof Structures, Inc., St. Louis, Missouri. Contractors were W. A. Lott, Inc., and Johnson, Drake and Piper, Inc.